

ABSTRACT

A locked hinge based technique for controllably holding surface-micromachined modules off the edge of a substrate for subsequent processing. The mechanism enables reliable, accurate, and low-cost fabrication of even complex multi layer flip-chip MEMS devices using for example only a simple two-layer module processing sequence, a sequence involving materials already in use in the process. The sequence is also free from the interference of an alignment-hindering sacrificial substrate member. The technique is disclosed by way of a micromirror example and is arranged for convenient bypassing where use of another bonding technique is desired.